



Under the Covers: Exploring the Technical Infrastructure

Any enterprise system relies on a robust and multi-part infrastructure to support flexibility while still providing needed functions. Class Climate is no different. At its heart, it relies on tightly integrated elements that ensure you get a full-featured evaluation system that is easy to implement, configure, and maintain.

Class Climate's central server relies on three major components:

- Database (MySQL or MS-SQL)
- Web server (IIS or Apache)
- VividForms Reader (for scanning)

The database stores all the components you need to create and distribute evaluations, like student rosters, faculty lists, question libraries, questionnaire forms, and much more.

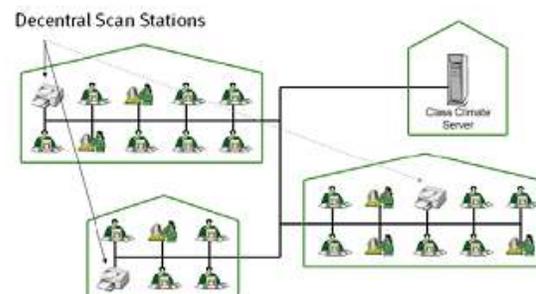
The web server hosts the interface the evaluation team members work in to load rosters and lists, create questionnaires, deliver the questionnaires to mobile, online, and paper participants, collect responses from mobile/online participants, and provide reports to stakeholders. Using a browser to access the web server, active users (such as the evaluation coordinator, the report creator and the data entry assistant) can work with Class Climate. Browser connections use high-quality encryption to protect student privacy.

Scanning stations are connected online to the network and send image documents from the scanned survey batches to the document capture process. The document capture tool interprets the images and stores the scanned raw and analyzed data in the database, alongside the online responses. Among other things, this ensures that all responses are gathered into a single location where they can be analyzed as a unit, regardless of the response method used.

Planning Scan Stations

Manual data analysis is cumbersome and results in too long a time between when data is captured and when you can deliver reports to the instructors. Without an automated system, this can consume the entire term break. Under these circumstances, there is little chance that instructors will or even *can*

give their course evaluation feedback the desired attention. Instructors *must* receive their feedback as soon as possible—*instantly* would be best—while they are still involved in the course or once grades are posted. Rapidly delivered results allow instructors to reflect on the results and make changes in their instruction.



If you are using paper forms (either by themselves or alongside online questionnaires), you can set up scan stations where they are needed—even when there are a number of university campuses or locations. In these scanning hubs, you can deploy scanners of varying performance characteristics (e.g., single page vs. 30 to 300 pages feeder capacity) as required.

TIP: When locations are far apart, FTP or HTTPS protocols are also available for image transfer.

User Roles in Class Climate

Class Climate distinguishes between active and passive user accounts:

- Passive users are instructors or deans who simply receive emailed reports and raw data. The optional instructor questions are the only exception as passive users are able to use a web browser to add important content for the questionnaire.
- Active users log in to the Class Climate server and use the web interface. This type of user includes (but is not limited to):
 - central evaluation coordinators (administrators, including subunit administrators)
 - report creators, who can create summary and department reports and norm reference data pools
 - data entry assistants
 - verifiers
 - active survey account owners, who carry out surveys independently from the central evaluation

If you are an active user, you can develop your own questionnaires. Once developed, you can distribute questionnaires online (to mobile devices, browsers, or the university's learning management system). If you prefer paper forms or want a combination of mobile, online, and paper distribution, you can download questionnaires in PDF format, then print them out and administer them. Active Survey Accounts enjoy special protection in Class Climate—the data “belongs” to the survey account owner.

Deans can be given access to central quality management (QM) views, which enables them to filter hundreds of surveys for responses fulfilling certain criteria, for example, whether a type of course exceeds or fails to meet certain minimum quality standards (QM guidelines). This enables deans to spot those courses needing their attention quickly.

Data entry assistants can read and categorize handwritten student comments from paper forms, where desired. This optional function protects students' privacy in small classes where the instructor could recognize their handwriting and can lead to greater candor in their comments. At the same time possibly offensive comments or those that might violate data security can be removed, which serves to protect the instructors.

Verifiers are able to review questionable paper form checkmarks based on image snippets which are extracted from the scanned questionnaires. This is especially important if the data requires a high degree of accuracy. However, the verification process requires labor time which may not be needed for other empirical data.

Multi-Language Support

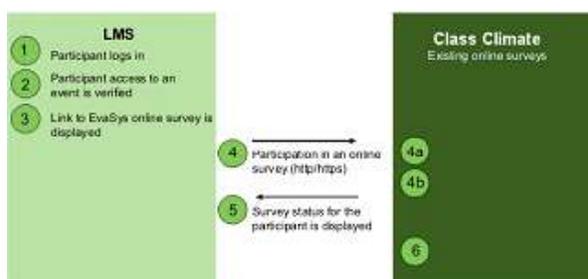
Since email communication and reporting in Class Climate is based on translatable text modules, Class Climate supports multilingual environments. This multilingual support can be very convenient for organizations that operate internationally, as well as for organizations who aim to be attractive for employees, students or customers with intercultural backgrounds. The user interface is available in English and other languages upon request.

Each user can work with the system in his or her preferred language. Participants in online surveys can access a translated version of the questionnaires that also contains internationalized interface elements

Connecting to Your Learning Management System (LMS)

Scantron knows many institutions rely on an LMS to provide student support, so we created a variety of predefined connectors to commonly-used Learning Management Systems, including Blackboard Learn[®], Brightspace[™], and Moodle[™]. These connectors help increase response rates for online evaluations by making sure students know which courses they need to evaluation. See [LMS Integration](#) on the Class Climate web page for details.

SOAP Application Programming Interface (API)



If you need customization beyond connecting to an LMS, Class Climate provides a SOAP-based API to support connecting data processing systems that are conducting surveys interactively. Using the API, you can incorporate (“show”) Class Climate functions (e.g. creating surveys, access to online surveys or recalling results reports) in other systems.

A typical example of this (as shown above) is integrating Class Climate online surveys in web-based Learning Management Systems (LMS), such as Brightspace, Moodle, Blackboard, Angel, and Canvas. The survey participant receives a list of online surveys in his LMS environment, which are “blended in” live via a Class Climate process running in the background.

A variety of integration options are available. See the [Product Training, Implementation, and Professional Services brochure](#) for a complete list of the services we can provide.

How can Scantron help?

Scantron is a long-time leader in assessment solutions and services. We've served the education market from kindergarten to professional career development for more than 40 years. Our course evaluation solution, Class Climate, provides the best in course and instructor evaluations, and delivers broad-based survey functionality as well.

Class Climate provides world-class support for course evaluations. It's built-in structure mimic department and course structure for most institutions—and can be customized to fit as necessary. Libraries make it easy to design and re-use questions year-over-year for longitudinal tracking. Core questionnaires that allow for instructor customization ensure that the needs of both administration *and* individual faculty or departments are met. Automated reminders and connectors to many common learning management systems make it easy to increase and track responses. Quality dashboards provide immediate, at-a-glance quality tracking and comparison.

Class Climate provides the greatest possible degree of automation for comprehensive course evaluation. The potential value of this solution to you can be seen in these critical areas:

- **Digital document capture**
“Scanning, not typing” means a drastic cost reduction in capturing data while minimizing errors. Within a few hours you can accurately analyze tens of thousands of survey questionnaires.
- **Instant feedback for optimum self-reflection**
Instant feedback means a new quality in evaluation for instructors. They can reflect on the feedback and make changes while they are still involved in the ongoing course. Norm reference values and comparative profile lines motivate instructors to optimize their teaching.
- **Batch processing by support with organization- and metadata**
To systematically categorize hundreds or thousands of surveys, Class Climate imports existing data from course catalogs and faculty registers. The support provided by this metadata framework enables you to create reports, set up norm reference value data and make comparisons across subsets (programs of studies, departments, instructors, courses, etc.).
- **Organizational overview and central process control**
Class Climate provides a kind of “process control center” for the central evaluation coordinator. This perspective can give university executive officers, as well as department heads valuable insights. Optional QM views provide a high degree of openness. “Learning from the best” is supported, as is the identification of quality weaknesses.
- **Empowerment**
Class Climate provides both decentral, instructor-oriented surveys using active

survey accounts as well as central evaluations. Both procedures can be combined, yielding interesting possibilities such as giving university service organizations their own survey accounts (e.g. cafeteria, administration, library). And Class Climate can resolve the issue of ensuring relevance of centrally conducted course evaluations to a particular discipline. Faculty members are systematically involved and instructors with active accounts using the VividForms questionnaire designer can evaluate any aspect of the courses they are interested in—internet access is all it takes.

Class Climate provides specific advantages for everyone in the organization involved in evaluation:

- **Students** can expect that their judgments are analyzed and forwarded to their instructors quickly. Class Climate also takes security issues for students seriously. Class Climate promotes the dialog between teacher and student.
- **Instructors** spend a minimum amount of time and receive optimum feedback for self-reflection. Class Climate enables them to supplement the survey with their own individual questions. They receive reports that enable them to compare themselves with other reference groups.
- **University executive officers** establish an efficient service infrastructure and emphasize the service aspect of the central evaluation. University executives can also show that they take the needs, and anxieties, that often accompany an evaluation seriously.
- **The Computer Center** appreciates the web-based approach, which means that a client installation is not needed. As a result, the university-wide roll-out is smooth and trouble-free. Security and data protection aspects are high priorities for Class Climate. In addition, we offer hosting services for institutions who prefer to leave the IT work to us.
- **Third parties:** Student organizations, the administration, thesis students, research project members, PhD students, library, cafeteria—Class Climate is a web service that can be used anywhere in the organization where survey data needs to be gathered. Departments of social science especially appreciate this sophisticated mechanism for survey data capturing.

Class Climate users have been involved in its development from the very beginning. The requirements originated in practice and were decisive in developing the features that Class Climate now provides. Users of the system provide feedback on features, requests, and ideas for improvement are discussed intensively and have led to the development of standard software for course evaluation. This can also be seen in the detailed product documentation, training materials and coherent support concept.

Scantron's Professional Services team is here to help!

- **Professional development** enables you and your staff to navigate the software and interpret the results more effectively. Scantron Corporation has a fully staffed corporate development department through which we offer an array of product training and staff development classes and seminars for Class Climate.

The team is dedicated to building capacity for change within organizations and institutions through a series of training and consulting activities.

- Get your first evaluation or survey project up and running faster with Scantron **Implementation Services**. We provide dedicated experts with extensive experience in course evaluation management to help you implement your system and begin processing your surveys quickly and efficiently for a more rapid return on investment. The Scantron implementation team works with you to create a manageable schedule customized to ensure your success in the evaluation process. Depending on your needs, consultations can be performed onsite or via the phone or web.
- Scantron offers a wide array of **Professional Services** to customize, enhance, and support your Class Climate capabilities. Save yourself time by letting Scantron do the work for you. We listen to your needs and then work with you to create the applications you require.

Scantron's world-class **Print Services** are available to print your custom forms and fulfill your large-volume needs with mailing and data processing services.

Whatever the evaluation or survey assistance you need, Scantron has the products, tools, services, and expertise to help you ensure that you have the right program for your students. Our web-based software, combined with our length and breadth of experience, help you get the most out of your evaluations and results. Contact us today and see how Scantron can meet you where you are and help you get to where you want to be.

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